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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,570	01/28/2004	David H. Berry	BERY 0101 PUS	4031

22045 7590 05/31/2005

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EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,570

Applicant(s)

BERRY, DAVID H.

Examiner

Alison K. Pickard

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5-3-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-14, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagelin (3,451,696) in view of Czaplicki (5,985,435).

Hagelin discloses an expandable seal and method of making the seal comprising a material 5 or 9 having a foaming agent activated by heat, a heating agent 6 or 8, and a heat conductive barrier 4 or 7 (conducts heat from 6 to activate 5). The seal is disposed between a u-shaped member 2 and a flange 1. The material expands radially. The barrier has three sides and an open side that directs the expansion. The barrier prevents mixing of the agent and material. Hagelin does not specifically disclose the material is polymeric. Czaplicki teaches a heat expandable seal using materials that form an effective seal. Czaplicki teaches making the seal from a polymer adhesive, such as polyvinyl chloride, and a foaming agent, such as azodicarbonamide to form the effective seal. The materials each have a melting temperature range such that the polymer can be activated at a temperature lower than the foaming agent (see col. 3, lines 35-57 and col. 5, lines 1-7). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the expandable seal of Hagelin from the materials taught by Czaplicki to provide an effective seal.

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Regarding claim 5, Hagelin does not disclose the barrier thickness. It is not considered inventive to discover the workable or optimum ranges by routine experimentation without some showing of an unexpected result. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the barrier thickness have an average between 0.0005 to 0.050 inches.

Regarding claims 8 and 20, Hagelin does not specifically state the heating agent is a fuel and oxidizer. The selection of a known material based on its suitability for its intended use is not considered inventive. See *In re Leshin* 125 USPQ 416 (CCPA 1960). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to use a fuel and oxidizer as a heating agent.

3. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagelin in view of Czaplicki as applied to claims 1 and 12 above, and further in view of Wilton (3,051,509).

Wilton teaches using copper as an effective heat conductor to distribute heat from a heating agent to a polymeric material. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the barrier of copper to provide an effective heat conductor.

Regarding claim 15, Hagelin does not disclose the barrier thickness. It is not considered inventive to discover the workable or optimum ranges by routine experimentation without some showing of an unexpected result. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the barrier thickness 0.002 inches.

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Conclusion


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062.

The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on 571-272-7049. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Alison K. Pickard
Primary Examiner
Art Unit 3676

AP